

WHAT IS CLAIMED IS:

1. A seat recliner comprising:
 - a base mounted to a first seat member;
 - a gear mounted to a second seat member and being rotatable relative to the base, the gear having first teeth along a peripheral face of the gear;
 - a locking member movable inside of the first teeth, the locking member having second teeth engageable with the first teeth;
 - 10 a cam configured to rotate the locking member to engage the first and second teeth with each other for establishing an angle between the first and second seat members;
 - a guide on the base and having a guide face for slidably guiding the locking member to engage the first and second teeth with each other,
 - 15 the guide extending radially from a vicinity of the first teeth to a vicinity of the cam,
 - a near side of the guide relative to the first teeth and the locking member defining a gap therebetween.
- 20 2. The seat recliner according to claim 1,
 - wherein an action line is normal to a gear face of a second tooth of the locking-member at the furthest position from the guide,
 - 25 wherein the gap extends radially inside of a position where the action line crosses the guide.
3. The seat recliner according to claim 1,
 - wherein the locking member is rotatably supported by a pivot on the base,

wherein the locking member has an arced outer peripheral part, and

wherein the outer peripheral part is slidably supported by the guide face of the guide for engaging the first and second 5 teeth with each other.

4. The seat recliner according to claim 1,
wherein the locking member is slidably supported by guide faces of a pair of guides parallel to each other for engaging 10 the first and second teeth with each other, and
wherein one of the locking member and the guides has a recess.

5. The seat recliner according to claim 1,
wherein the gap extends radially inward from a vicinity 15 of the first teeth,
wherein the guide has an end at a near side of the guide relative to the first teeth,
wherein the gap has a gap portion between the end and an 20 outer peripheral face of the locking-member opposite to each other,
wherein the gap portion is narrower than another gap portion.

25 6. The seat recliner according to claim 5,
wherein the end of the guide has an end face configured to abut against the locking member, and
wherein the end face is inclined radially outward 30 relative to a direction of moving the locking member guided by the guide face.

7. The seat recliner according to claim 5,
wherein the base has a pivot in a vicinity of the first
gear,

5 wherein the pivot and the guide have the second teeth of
the locking member interposed therebetween, and
wherein the pivot functions as a fulcrum of the locking
member.

10 8. The seat recliner according to claim 5,
wherein an action line is normal to a gear face of a second
tooth of the locking member at the furthest position from the
guide, and

15 wherein the gap extends radially inward from a vicinity
of the first teeth to a position where the action line crosses
the guide.